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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/642,642	08/22/2000	SHINGO SUZUKI	107100	9149

25944 7590 08/11/2004

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EXAMINER

NGUYEN, KIMNHUNG T

ART UNIT	PAPER NUMBER
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2674

DATE MAILED: 08/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/642,642

Applicant(s)

SUZUKI, SHINGO

Examiner

Kimnhung Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2 and 9-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2 and 9-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>19</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Application has been examined. The claims 2 and 9-14 are pending. The examination results are as following.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 2, 9-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yokota et al. (US patent 5,764,315) in view of Egawa et al. (US 6,295,104).

3. Regarding claim 2, Yokota et al. disclose in figures 14 and 28, a spread illuminating apparatus in which a square transparent substrate (60) is provided close to the surface of a liquid crystal panel (see abstract), and a plurality of straight groove portions (61a, 61b) are formed on the surface of the transparent substrate intersecting one another obliquely with respect to the four sides of the transparent substrate so as to reflect light toward said liquid crystal panel (see a planar lighting device, see column 5, lines 24-29). However, Yokota et al. do not disclose whereby light traveling in a direction substantially parallel to the major surface of the transparent substrate is reflected at said plurality of straight groove portions in a direction substantially perpendicular to the major surface of the transparent substrate so as to travel toward the liquid crystal panel. Egawa et al. disclose in figures 3-4, a light (7) traveling and passed through the

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groove (8) in a direction may be substantially parallel to the major surface of the transparent substrate (2) is reflected at said plurality of straight groove portions in a direction substantially perpendicular to the major surface of the transparent substrate so as to travel toward the liquid crystal display element L (see figure 3, column 6, lines 32-60). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the traveling and passed through the groove (8) in a direction may be substantially parallel to the major surface of the transparent substrate (2) so as to travel toward the liquid crystal display element L as taught by Egwa et al. into the spread illuminating apparatus in which a square transparent substrate of Yokota et al. because this would for providing the progressing direction of the light reflected from the transparent substrate between the reflection type LCD element and the transparent substrate and so as to be in close contact with the both surfaces thereof.

4. Regarding claims 9-11, Yokota et al. disclose that the wherein the groove portions are substantially triangular in cross section (see figures 5, 21), and wherein the interval between the groove portion is decrease as the distance from the bar-like light source (see figure 11, see the angle of two slops of convex and concave, see column 6, lines 7-25), or the depth of the groove portions is increased as the distance from the bar-light source increase (see the dept of convex and concave, see column 6, lines 18-49).

5. Regarding claims 13-14, Yokota et al. disclose that wherein the bar-like light source comprises a bar-like fluorescent tube (33) and the bar-like light source also includes an inherent bar-like transparent light conductive member and a light emitting diode which is provided at the

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end portion of the bar-like transparent light conductive member (see column 1, lines 39-44, see figure 4, column 2, lines 51-55).

Regarding claim 12, Yokota et al. disclose every feature of the claimed invention, excluding the bar-like light source is in the range of 10 to 45 degrees. From the claims, it would have been obvious to one of ordinary skill in the art to the Yokota et al.'s system to have the bar-like light source is in the range of 10 to 45 degrees as claimed since such a modification would have involved a mere change in the range of the system. A change in range is generally recognized as being within the level of ordinary skill in the art, absent unexpected results.

See In re Rose, 105 USPQ 237 (CCPA 1995) and

In re Raven, 156 USPQ 679 (CCPA 1968).

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimnhung Nguyen whose telephone number (703) 308-0425.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **RICHARD A HJERPE** can be reached on **(703) 305-4709**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D. C. 20231

Or faxed to:


(703) 872-9314 (for Technology Center 2600 only).

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Hand-delivery response should be brought to: Crystal Park II, 2121 Crystal Drive,
Arlington, VA Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding
should be directed to the Technology Center 2600 Customer Service Office whose telephone
number is (703) 306-0377.

Kimnhung Nguyen
August 7, 2004


RICHARD HJERPE 8/9/04
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600